

Proteinase K, recombinant, (20mg/ml)

For efficient digestion of proteins in biological samples and for eliminating DNases and RNases during nucleic acid isolation

Catalog Number: B301-01, B301-02, B301-03, S003-04

Product Introduction

Proteinase K is a nonspecific serine protease that is useful for the general digestion of proteins. Proteinase K cleaves peptide bonds at the carboxylic sides of aliphatic, aromatic, or hydrophobic amino acids. The smallest peptide to be hydrolyzed by this enzyme is tetrapeptide. The molecular weight of Proteinase K is 28,900 Daltons (28.9 kDa). This enzyme exhibits high stability and activity in the presence of SDS, EDTA, and urea, as well as over a wide pH range. Proteinase K is used for the destruction of proteins in cell lysates (tissue, cell culture cells) and for the release of nucleic acids. Proteinase K is useful for the inactivation of nucleases and lysis during the isolation of DNA and RNA.

Features

- Stable at room temperature and easy to use.
- High activity in elevated temperatures (up to 56°C) and under denaturing conditions
- Stable over a wide pH range of 4.0–12.5 for use in a variety of applications

Applications

- Isolation of plasmid and genomic DNA
- Isolation of genomic DNA from mouse tail
- Isolation of genomic DNA from cultured cells
- Isolation of RNA
- Inactivation of RNases, DNases and enzymes in reactions
- Improving cloning efficiency of PCR products.

Reagents Supplied

Product Number	B301-01	B301-02	B301-03	B301-04
Proteinase K Solution (20mg/ml)	1 ml	5 ml	25 ml	50 ml

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Storage and Stability

20mg/ml Proteinase K in 10 mM Tris-HCl, pH 7.5; 1 mM CaCl₂; and glycerol as stabilizers. Proteinase K Solution is shipped at ambient temperature and is stable for at least 12 months from the date of purchase when stored at room temperature (15-25°C). To prolong the shelf-life of Proteinase K, storage at 2–8°C is recommended.

Product Notes

Proteinase K is active in a wide range of buffers. It is highly active between pH 7.5 and 12 and temperatures 20–65°C. Proteinase K is also active in chelating agents such as EDTA and activity is stimulated in up to 2% SDS or 4M urea. Ca²⁺ protects Proteinase K against autolysis, increases the thermal stability, and has a regulatory function for the substrate binding site of Proteinase K.

Quality Control

The Certificate of Analysis provides detailed quality control information for each product. Certificates of Analysis are available on our website. Go to www.amdbiotech.com and search for the Certificate of Analysis by product lot number, which is printed on the box.

Disclaimers and Safety Information

This kit is designed for research use only. All biological samples are considered potentially infectious. When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). MSDS can be downloaded from the “Product Documents” tab when viewing the product kit. Download MSDS at www.amdbiotech.com. Information in this document is subject to change without notice.